

Claims:

1. Polyethylene glycol with a residual content of less than 30 ppm aldehyde, determined as formaldehyde as specified in Ph. Eur. "macrogols" monograph 07/2003:1444.
2. Polyethylene glycol as claimed in claim 1 with a residual content of less than 15 ppm aldehyde.
- 10 3. Polyethylene glycol as claimed in claim 1 or 2 with an average molar mass of from 190 to 40 000.
4. Polyethylene glycol as claimed in claim 1 or 2 with an average molar mass of from 190 to 210.
- 15 5. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of monoethylene glycol in the presence of a basic catalyst, which comprises a monoethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, triethylene glycol and higher glycols, at a pressure of less than 40 hPa and a temperature of from 90 to 200°C, being employed.
- 25 6. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of monoethylene glycol in the presence of a basic catalyst, which comprises a monoethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, triethylene glycol and higher glycols, at a pressure of from 5 to 20 hPa and a temperature of from 100 to 150°C, being employed.
- 30 7. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of monoethylene glycol in the presence of a basic catalyst, which comprises a monoethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, triethylene glycol and higher glycols, at a pressure of 10 hPa and a temperature of 120°C, being employed.
- 35 8. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of diethylene glycol in the presence

of a basic catalyst, which comprises a diethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, triethylene glycol and higher glycols, at a pressure of less than 40 hPa and a temperature of from 100 to 220°C, being employed.

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9. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of diethylene glycol in the presence of a basic catalyst, which comprises a diethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, 10 triethylene glycol and higher glycols; at a pressure of from 5 to 20 hPa and a temperature of from 120 to 180°C, being employed.

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10. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of diethylene glycol in the presence 15 of a basic catalyst, which comprises a diethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di- and triethylene glycol, at a pressure of 10 hPa and a temperature of 150°C, being employed.

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11. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of triethylene glycol in the presence of a basic catalyst, which comprises a triethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, triethylene glycol and higher glycols, at a pressure of less than 40 hPa and 25 a temperature of from 140 to 250°C, being employed.

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12. A process for preparing polyethylene glycol as claimed in one or more of claims 1 to 4, by ethoxylation of triethylene glycol in the presence 30 of a basic catalyst, which comprises a triethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, triethylene glycol and higher glycols, at a pressure of from 5 to 10 hPa and a temperature of from 140 to 160°C, being employed.

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13. A process for preparing polyethylene glycol as claimed in one or 35 more of claims 1 to 4, by ethoxylation of triethylene glycol in the presence of a basic catalyst, which comprises a triethylene glycol which is obtained by distillation from a glycol mixture consisting substantially of mono-, di-, triethylene glycol and higher glycols, at a pressure of 5 hPa and a temperature of 140°C, being employed.

14. The process as claimed in any of claims 5 to 13, wherein a dried alkali metal hydroxide or alkaline earth metal hydroxide being employed as basic catalyst.

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15. The process as claimed in any of claims 5 to 13, wherein a dried sodium hydroxide being employed as basic catalyst.

10 16. The use of the polyethylene glycol as auxiliary or active ingredient in cosmetic and pharmaceutical preparations.